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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,715	01/11/2001	Kenneth Lloyd Westra	THOLAM P139US	9530

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EXAMINER

LAVARIAS, ARNEL C

ART UNIT PAPER NUMBER

2872

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,715

Applicant(s)

WESTRA ET AL.

Examiner

Arnel C. Lavarias

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 1-24, 26, 28, 29, 31-40, 42-44 and 46-62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25, 27, 30, 41 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Invention II, Species 2 in Paper No. 4 is acknowledged.
2. Claims 1-24, 26, 28-29, 31-40, 42-44, 46-62 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and nonelected species of Invention II, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

✓ Figure 18a- Reference numeral 42

✓ Figure 18b- Reference numeral 42.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

✓ Page 7, line 27- Reference numeral 22 not in Figures 4a-4b

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- ✓ Page 7, line 33- Reference numeral 10 not in Figures 2a-2b
- ✓ Page 9, line 14- Reference numeral 12 not in Figure 8
- ✓ Page 9, line 21- Reference numeral 26 not in Figure 8
- ✓ Page 9, lines 31, 32, 34- Reference numeral 16 not in Figures 9a-9b
- ✓ Page 9, line 34- Reference numeral 20 not in Figures 9a-9b
- ✓ Page 10, line 15- Reference numeral 20 not in Figures 11 and 12
- ✓ Page 10, lines 18, 21- Reference numeral 26 not in Figures 11 and 12
- Page 11, line 1; Page 19, lines 15-20- Reference numerals 46, 48 not in Figures 16 and 17
- Page 11, lines 13-37- Reference numerals 26, 58, 12, 16, 20, 22 not in Figures 18a-18b
- ✓ Page 18, lines 18, 20- Reference numerals 24, 26 not in Figure 7
- ✓ Page 18, line 24- Reference numeral 24 not in Figure 8
- ✓ Page 18, line 32- Reference numeral 16 not in Figures 9a-9b
- ~~Page 19, line 3- Reference numeral 14 not in Figure 12~~
- ✓ Page 20, line 2- Reference numeral 18 not in Figure 20.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities:

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting

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any errors of which applicant may become aware in the specification. Specific examples that require correction include the following:

- ✓ Page 4, line 9- 'innovated' should read 'innovative'
- ✓ Pages 4-6- all instances of '**FIGURE 1**' should read '**Figure 1a and 1b**', except for Page 4, line 25-26, which should read '**FIGURE 1a**'
- ✓ Page 5, line 14- '**FIGURES 4b**' should read '**FIGURE 4d**'
- ✓ Page 15, lines 9, 22- 'an isotropic' should read 'anisotropic'.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 25, 27, 30 and 45 rejected under 35 U.S.C. 102(b) as being anticipated by Stanley.

Stanley discloses a high reflectivity micro mirror (See Figure), comprising a monolithic bulk crystal silicon (See 1 in Figure) having an anisotropic body (inherently, bulk crystal silicon has an anisotropic body with multiple crystalline planes, each crystalline plane etching at different etch rates due to the differing atom densities and bonding structures of each crystalline planes) with a crystalline plane (in the instant case, the crystalline plane is taken to be one of the vertical planes of reflector 6 in the Figure),

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and a mirror surface (See 6 in Figure) co-extensive with a selectively exposed portion of the crystalline plane. Additionally, Stanley discloses the crystalline plane being positioned internally within the body and the body having an inlet passage (See for example 2 in Figure) and an outlet passage (See for example 3 in Figure) which intersect at the selectively exposed portion of the crystalline plane. Also, Stanley discloses the intersecting passages extending across the crystalline plane (See 5 in Figure).

8. Claim 41 is rejected under 35 U.S.C. 102(b) as being anticipated by Petersen.

Petersen discloses a high reflectivity micro mirror (See for example Figure 1) comprising a monolithic bulk crystal silicon (See col. 4, lines 15-17; 20 in Figure 1) having an anisotropic body (inherently, bulk crystal silicon has an anisotropic body with multiple crystalline planes, each crystalline plane etching at different etch rates due to the differing atom densities and bonding structures of each crystalline planes) with a crystalline plane and an exterior surface (in the instant case, the crystalline plane is taken to be the top surface of mirror 30 in Figure 1, and this surface is also an external surface), the body having the crystalline plane in a selected angular orientation (See col. 4, lines 32-34), and a mirror surface co-extensive with an exposed portion of the crystalline plane on the exterior surface of the body (See 30 in Figure 1). Petersen additionally discloses intersecting passages extending along the crystalline plane (See passage surrounding 30 in Figure 1).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The examiner can normally be reached on M-F 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703-308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Arnel C. Lavarias
September 18, 2002



Cassandra Spyrou
Supervisory Patent Examiner
Technology Center 2800